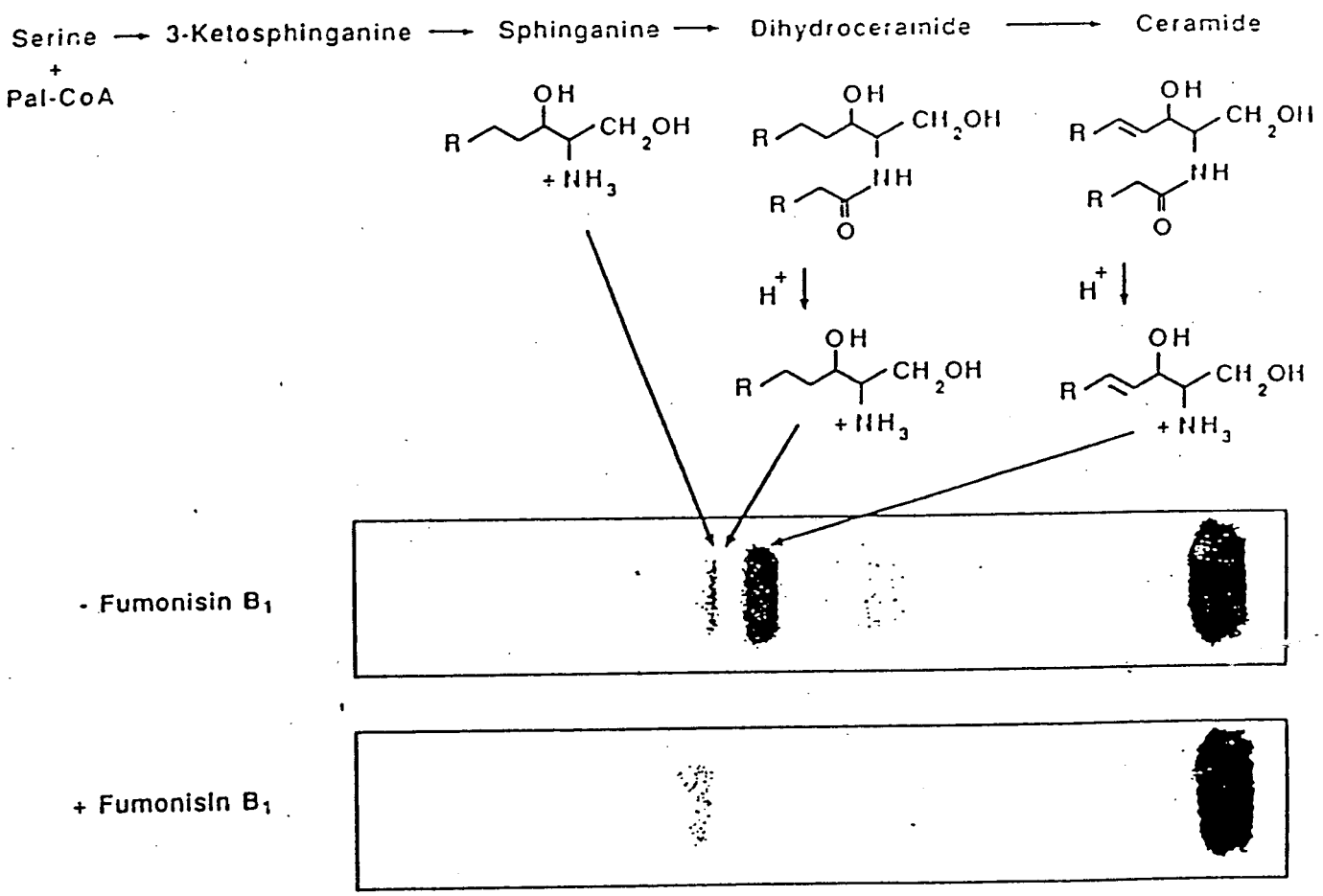
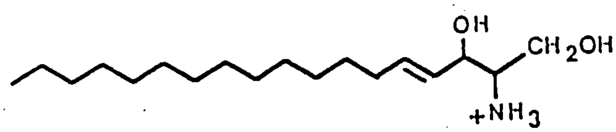


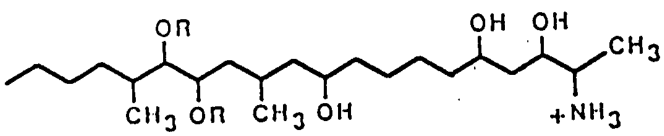
Figure 2

BEST AVAILABLE COPY

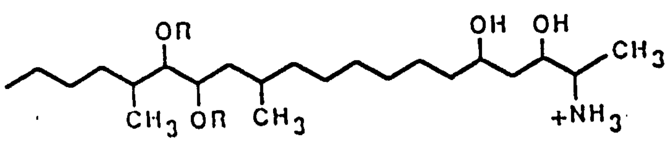
Figure 1



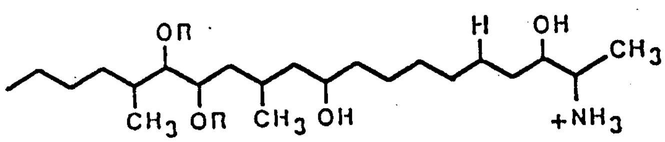
Sphingosine



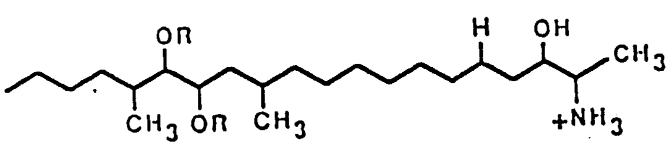
Fumonisin B1



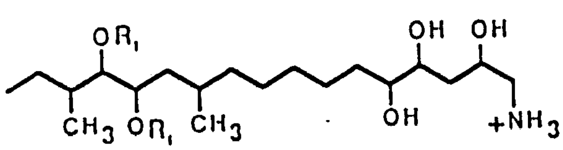
Fumonisin B2



Fumonisin B3

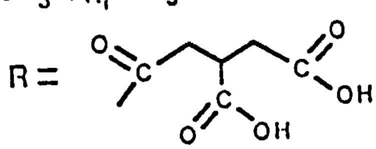


Fumonisin B4

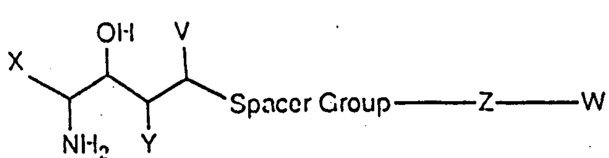


Alternaria toxins (AAL toxins)

R_1 = H or R



Tricarballylic acid



Fumonisin Analogs

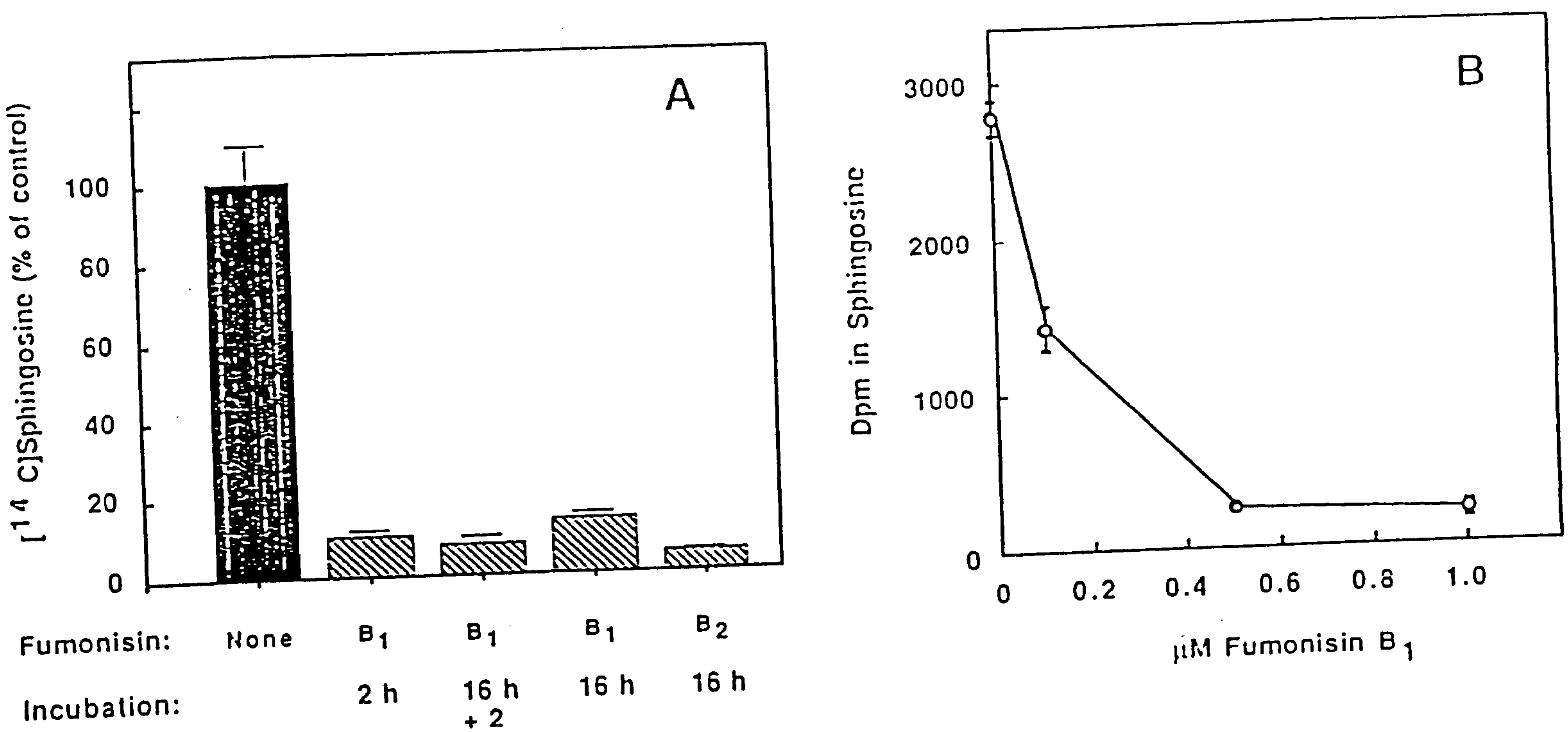

A
[14 C]Sphingosine (% of control)
100
80
60
40
20
0
Fumonisin: None B1 B1 B1 B2
Incubation: 2 h 16 h + 2 16 h 16 h
B
Dpm in Sphingosine
3000
2000
1000
0
0 0.2 0.4 0.6 0.8 1.0
µM Fumonisin B1

Figure 3

Figure 4

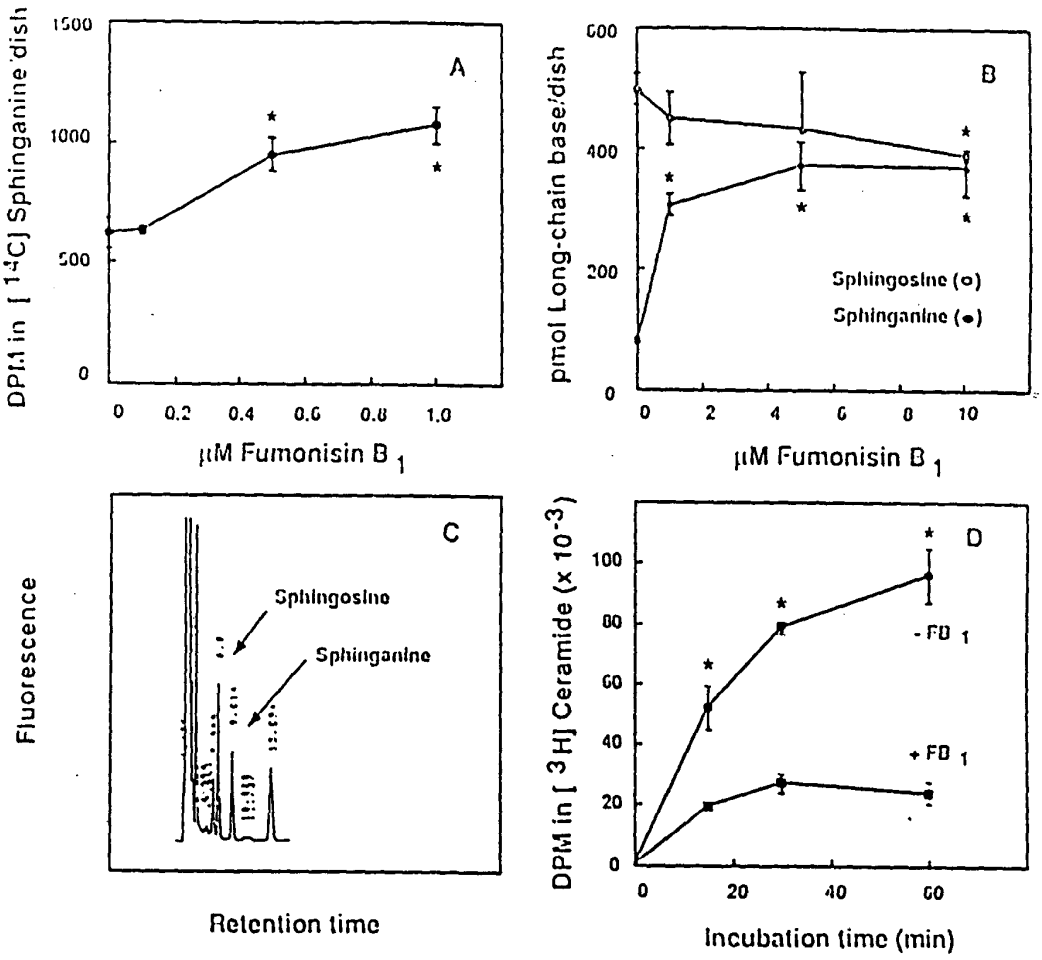
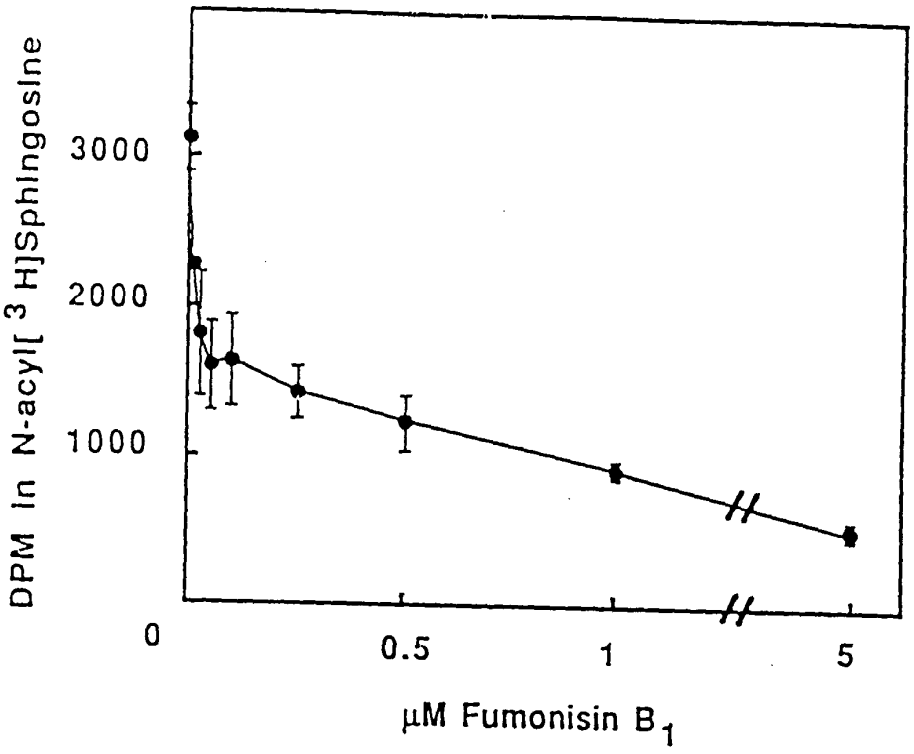

DPM in [14C] Sphinganine/dish
1500
1000
500
0
A
0
0.2
0.4
0.6
0.8
1.0
µM Fumonisin B 1
pmol Long-chain base/dish
600
400
200
0
B
0
2
4
6
8
10
Sphingosine (o)
Sphinganine (•)
µM Fumonisin B 1
Fluorescence
C
Sphingosine
Sphinganine
Retention time
DPM in [3H] Ceramide (x 10-3)
100
80
60
40
20
0
D
- FB 1
+ FB 1
0
20
40
60
Incubation time (min)

Figure 5


DPM In N-acyl[3 H]Sphingosine
3000
2000
1000
0
0.5
1
5
µM Fumonisin B1

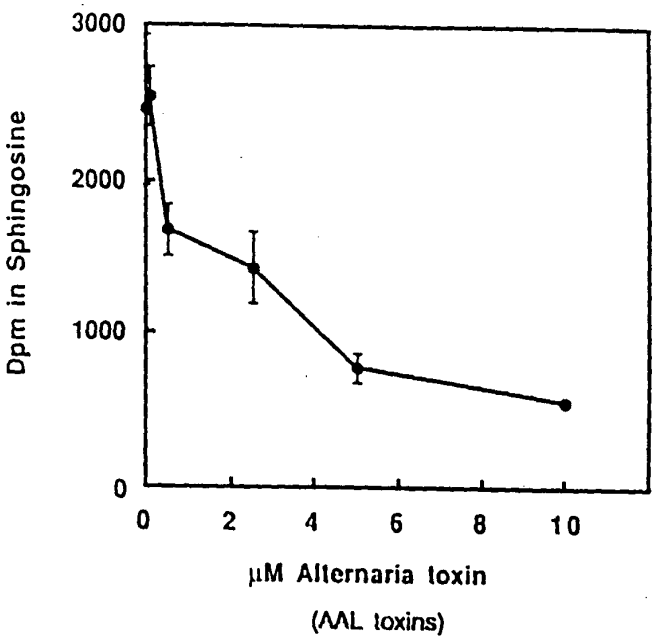

3000
2000
1000
0
Dpm in Sphingosine
0
2
4
6
8
10
µM Alternaria toxin
(AAL toxins)

Figure 6

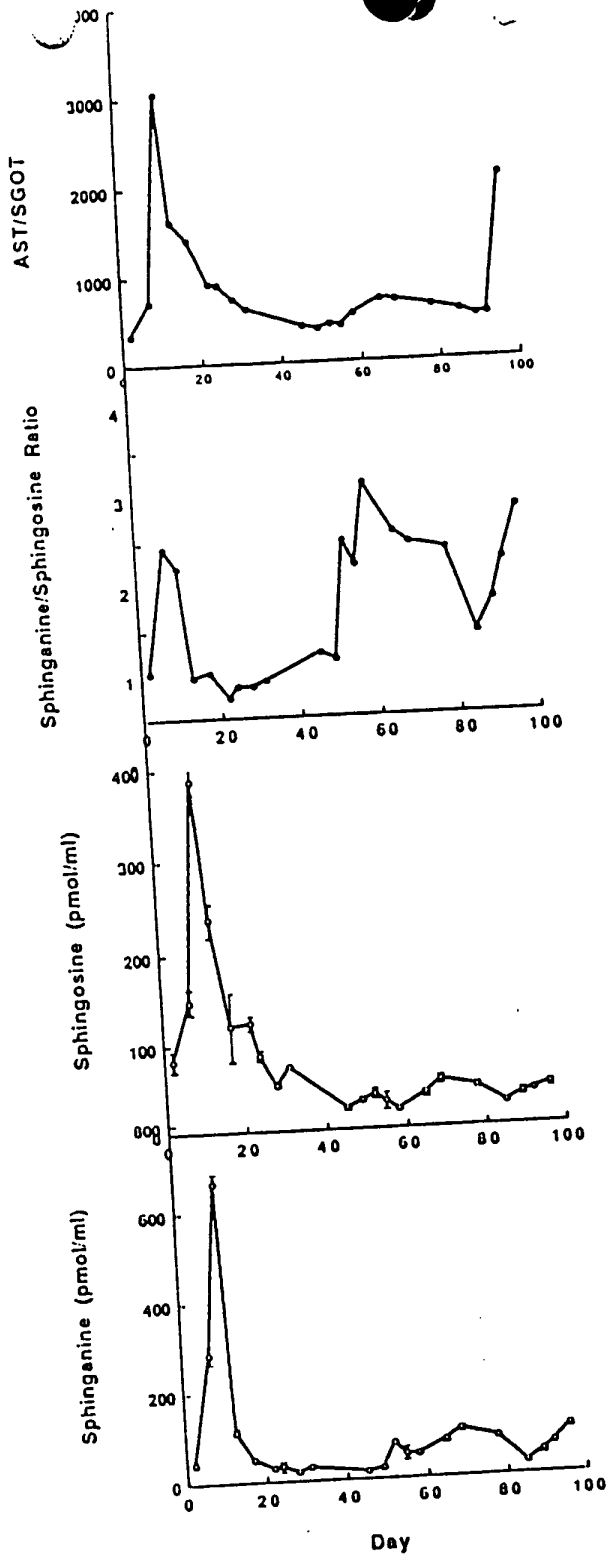

AST/SGOT
3000
2000
1000
0
20
40
60
80
100
Sphinganine/Sphingosine Ratio
4
3
2
1
Sphingosine (pmol/ml)
400
300
200
100
Sphinganine (pmol/ml)
600
400
200
Day

Figure 7

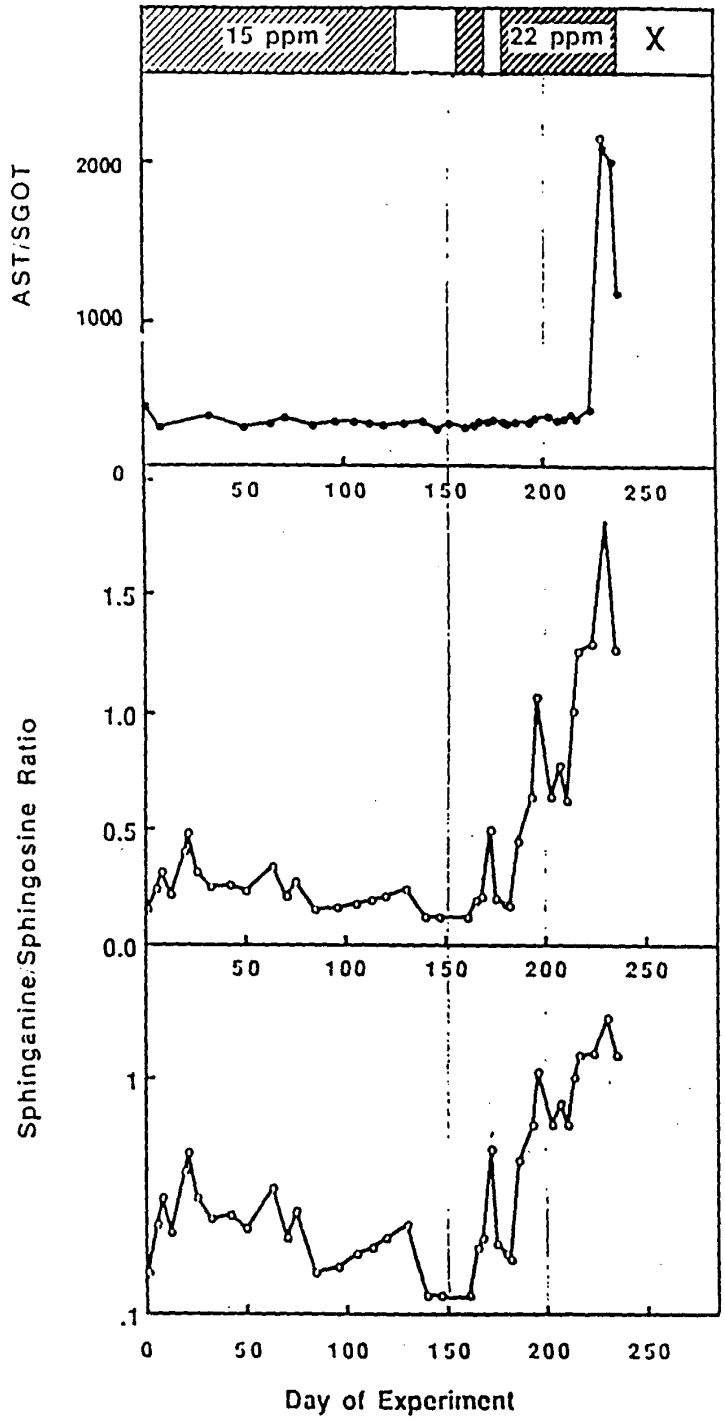

15 ppm
22 ppm
X
AST/SGOT
2000
1000
0
50
100
150
200
250
Sphinganine/Sphingosine Ratio
1.5
1.0
0.5
0.0
1
.1
Day of Experiment

Figure 8

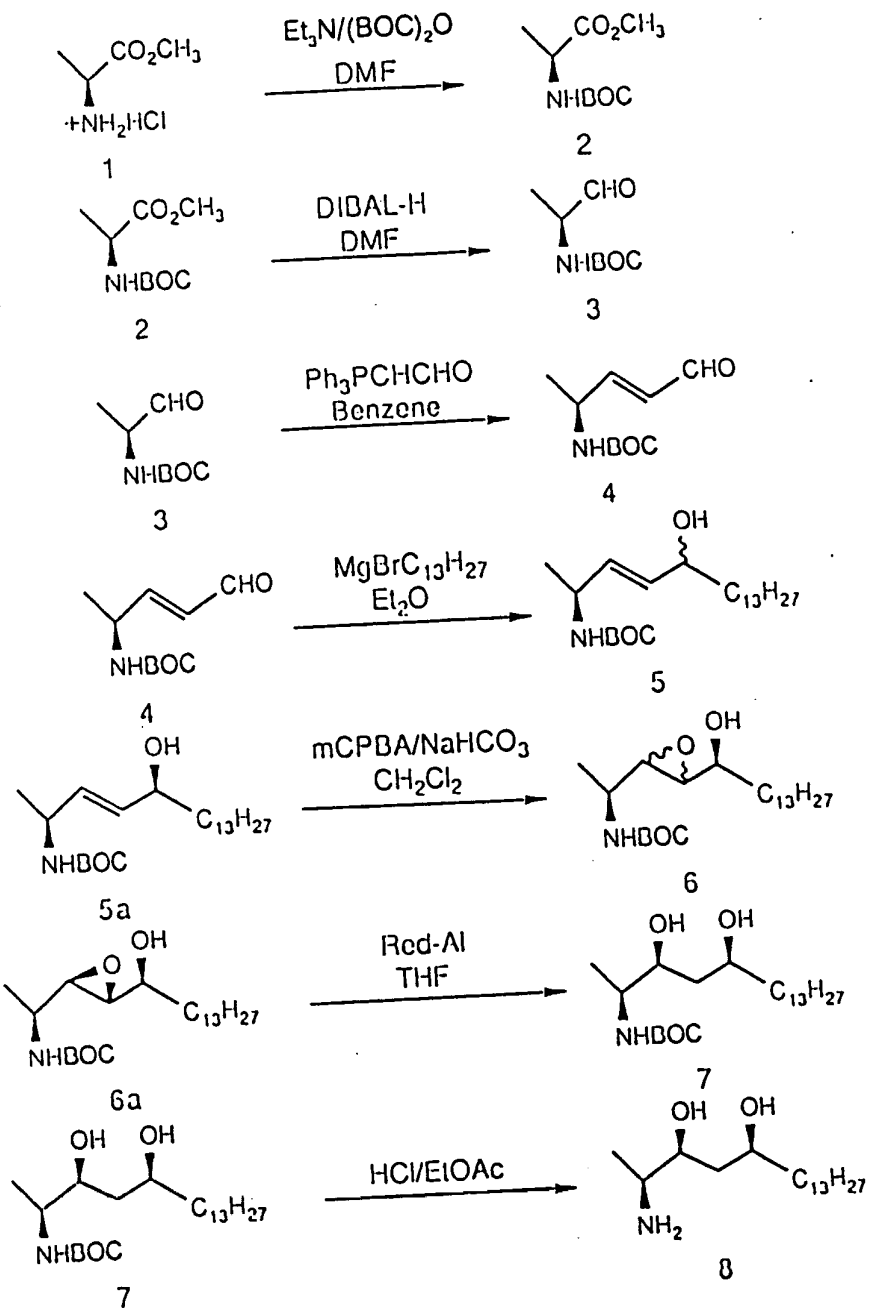
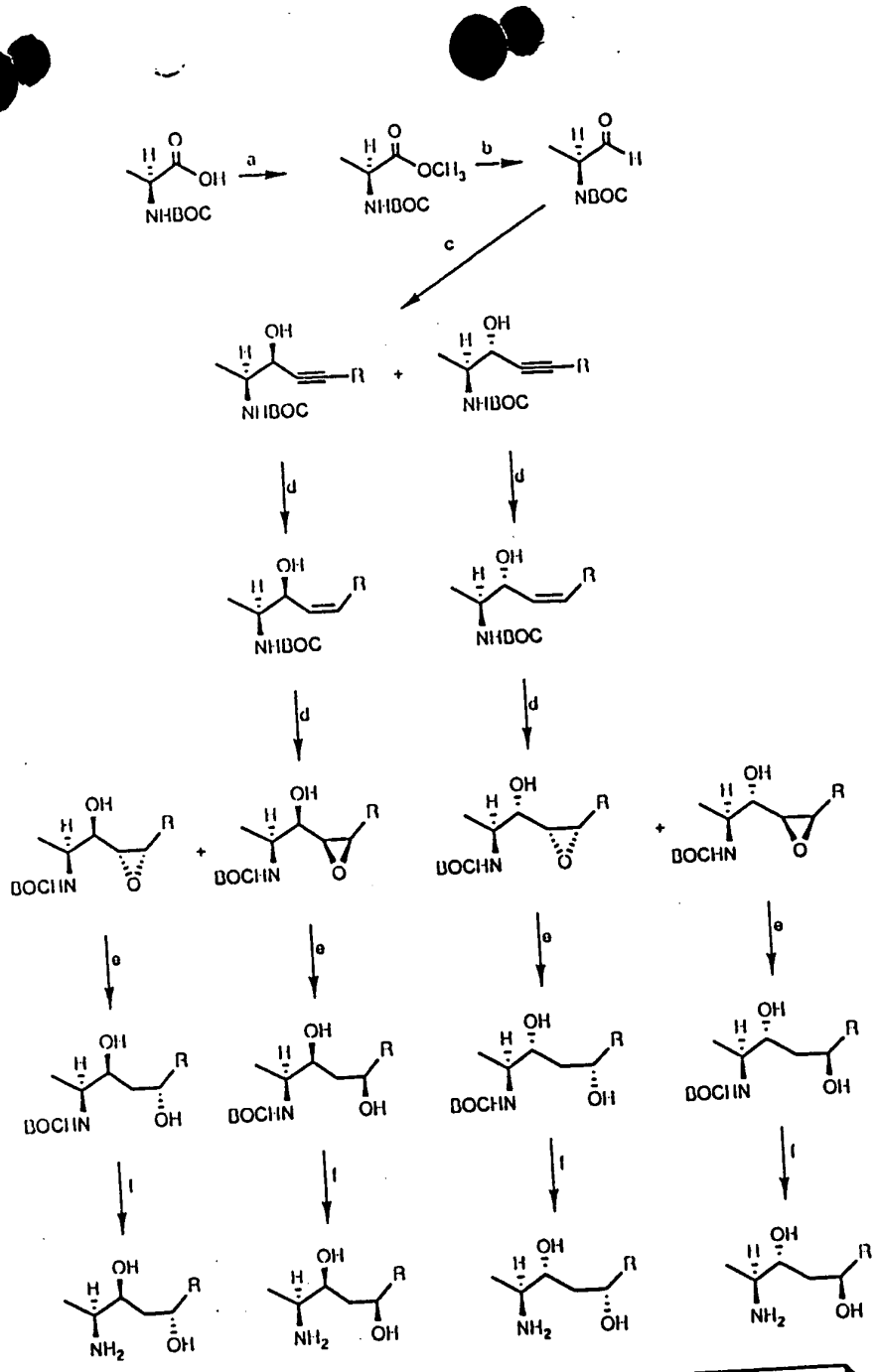

Et3N/(BOC)2O
DMF
CO2CH3
+NH2HCl
1
NHBOC
2
DIBAL-H
DMF
CHO
3
Ph3PCHCHO
Benzene
4
MgBrC13H27
Et2O
OH
C13H27
5
mCPBA/NaHCO3
CH2Cl2
O
6
5a
6a
Red-Al
THF
7
HCl/EtOAc
NH2
8

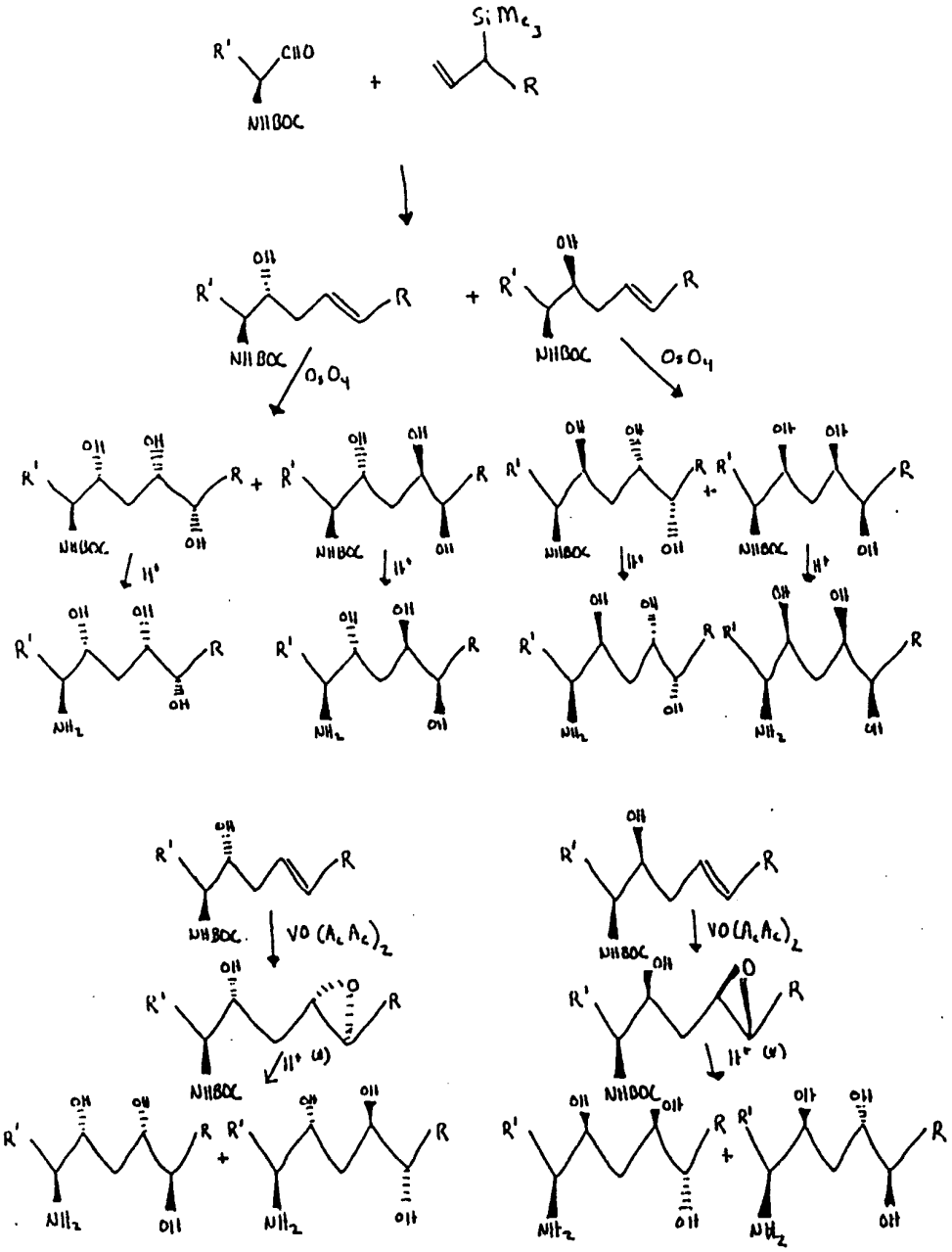
Figure 9



R = alkyl (straight chain or branched, C_0 - C_{20}), hydroxy alkyl, amino alkyl, alkylcarboxy (same definition of alkyl), aryl, esters of the hydroxyalkyl and alkylcarboxy groups, amides of the aminoalkyl and alkylcarboxy groups.

Figure 10

Figure 11



R = alkyl (straight chain or branched, C_8-C_{20}), hydroxy alkyl, amino alkyl, alkylcarboxy (same definition of alkyl), aryl, esters of hydroxyalkyl and alkylcarboxy groups, amides of the aminoalkyl and alkylcarboxy groups

R' = H, CH_3, C_2H_5, CH_2O - Protecting Group

(*) Epoxide opening and removal of the BOC group may be more efficiently achieved using two discrete hydrolysis steps